WHAT IS CLAIMED IS:

1. A method of processing communication signals in a communication system having a detector for detecting a parameter of a communication signal, comprising steps of:

(a) receiving a communication signal with a non-linear processor (NLP) adapted to examine the signal and to decide whether or not to enter an active state based upon a parameter of the signal, wherein if the NLP enters an active state, the NLP performs non-linear processing on the signal;

(b) communicating to the detector whether the NLP is active or inactive; and

(c) if the NLP is active, disabling a processing step of the detector.

2. The method of claim 1 wherein the NLP is adapted to decide whether or not to enter an active state based at least in part on whether the communication signal is active or inactive, wherein if the communication signal is active, the NLP enters or remains in an inactive state.

3. The method of claim 1 wherein providing step (a) comprises providing a near-end communication signal to an NLP, wherein the NLP is adapted to detect whether a far-end signal is active or inactive, wherein if the near-end signal is inactive and the far-end signal is active, the NLP enters an active state.

4. The method of claim 3 wherein if the NLP enters an active state, the NLP suppresses echo present in the near-end signal.

5. The method of claim 1 wherein disabling step (c) comprises causing the detector to enter an inactive state if the NLP is active.

6. The method of claim 1 wherein the communication system has a plurality of detectors for detecting parameters of a communication signal and wherein disabling step (c) comprises disabling a processing step of a plurality of detectors if the NLP is active.

7. The method of claim 1 wherein the detector comprises a dual-tone multiple-frequency (DTMF) detector adapted to detect DTMF signals in the communication signal and wherein disabling step (b) comprises causing the DTMF detector to cease detecting DTMF signals in the communication signal if the NLP is active.

8. The method of claim 1 wherein the detector comprises a call progress detector adapted to detect call progress tones in the communication signal and wherein disabling step (b) comprises causing the call progress detector to cease detecting call progress tones in the communication signal if the NLP is active.

9. The method of claim 1 wherein the detector comprises a call discriminator adapted to detect facsimile tones and modem tones in the communication signal and wherein disabling step (b) comprises causing the call discriminator to cease detecting facsimile tones and modem tones in the communication signal if NLP is active.

10. The method of claim 1 wherein the detector comprises an automatic gain control (AGC) element adapted to detect whether voice is present in the communication signal and to adjust the gain of any voice present in the communication signal and wherein disabling step (b) comprises causing the AGC to cease detecting whether voice is present in the communication signal and adjusting the gain of any voice present in the communication signal if the NLP is active.

11. A communication system comprising:

a non-linear processor (NLP) adapted to receive a communication signal and to decide whether or not to enter an active state based upon a parameter of the signal, wherein if the NLP enters an active state, the NLP performs non-linear processing on the signal; and

a detector adapted to detect a parameter of the communication signal, wherein the NLP communicates with the detector to indicate whether the NLP is active or inactive, wherein if the NLP is active, a processing step of the detector is disabled.

12. The communication system of claim 11 wherein the NLP is adapted to decide whether or not to enter an active state based at least in part on whether the communication signal is active or

inactive, wherein if the communication signal is active, the NLP enters or remains in an inactive state.

13. The communication system of claim 11 wherein the communication signal that the NLP is adapted to receive is a near-end signal and wherein the NLP is adapted to detect whether a far-end signal is active or inactive, wherein if the near-end signal is inactive and the far-end signal is active, the NLP enters an active state.

14. The method of claim 13 wherein if the NLP enters an active state, the NLP suppresses echo present in the near-end signal.

15. The communication system of claim 13 wherein the NLP receives the near-end signal from an echo canceller adapted to receive a near-end communication signal, to sample the far-end communication signal, to cancel echo present in the near-end signal using linear processing, and to provide a resulting echo-compensated near-end signal to the NLP.

16. The communication system of claim 11 wherein if the NLP indicates that the NLP is active, the detector enters an inactive state.

17. The communication system of claim 11 comprising a of plurality detectors for detecting parameters of a communication signal, wherein the NLP communicates with the plurality of detectors to indicate whether the NLP is active or inactive, wherein if the NLP is active, a processing step of a plurality of detectors are disabled.

18. The communication system of claim 11 wherein the detector comprises a dual-tone multiple-frequency (DTMF) detector adapted to detect DTMF signals in the communication signal and wherein if the NLP indicates that the NLP is active, the DTMF detector ceases to detect DTMF signals in the communication signal.

19. The communication system of claim 11 wherein the detector comprises a call progress detector adapted to detect call progress tones in the communication signal and wherein the call

progress detector ceases to detect call progress tones in the communication signal if the NLP indicates that the NLP is active.

20. The communication system of claim 11 wherein the detector comprises a call discriminator adapted to detect facsimile tones and modem tones in the communication signal and wherein the call discriminator ceases to detect facsimile tones and modem tones in the communication signal if NLP indicates that the NLP is active.

21. The communication system of claim 11 wherein the detector comprises an automatic gain control (AGC) element adapted to detect whether voice is present in the communication signal and to adjust the gain of any voice present in the communication signal and wherein the AGC ceases detecting whether voice is present in the communication signal and adjusting the gain of any voice present in the communication signal if the NLP indicates that the NLP is active.

22. A communication system comprising:

a non-linear processor (NLP) adapted to receive a communication signal and to decide whether or not to enter an active state based upon a parameter of the signal, wherein if the NLP enters an active state, the NLP performs non-linear processing on the signal; and

a detector adapted to detect a parameter of the communication signal by analyzing the communication signal that is provided to the NLP, wherein the NLP communicates with the detector to indicate whether the NLP is active or inactive, wherein if the NLP is active, a processing step of the detector is disabled.

23. The communication system of claim 22 wherein the NLP is adapted to decide whether or not to enter an active state based at least in part on whether the communication signal is active or inactive, wherein if the communication signal is active, the NLP enters or remains in an inactive state.

24. The communication system of claim 22 wherein the communication signal that the NLP is adapted to receive is a near-end signal and wherein the NLP is adapted to detect whether a far-

end signal is active or inactive, wherein if the near-end signal is inactive and the far-end signal is active, the NLP enters an active state.

25. The method of claim 24 wherein if the NLP enters an active state, the NLP suppresses echo present in the near-end signal.

26. The communication system of claim 24 wherein the NLP receives the near-end signal from an echo canceller adapted to receive a near-end communication signal, to sample the far-end communication signal, to cancel echo present in the near-end signal using linear processing, and to provide a resulting echo-compensated near-end signal to the NLP.

27. The communication system of claim 22 wherein if the NLP indicates that the NLP is active, the detector enters an inactive state.

28. The communication system of claim 22 comprising a of plurality detectors for detecting parameters of a communication signal, wherein the NLP communicates with the plurality of detectors to indicate whether the NLP is active or inactive, wherein if the NLP is active, a processing step of a plurality of detectors are disabled.

29. The communication system of claim 22 wherein the detector comprises a dual-tone multiple-frequency (DTMF) detector adapted to detect DTMF signals in the communication signal and wherein if the NLP indicates that the NLP is active, the DTMF detector ceases to detect DTMF signals in the communication signal.

30. The communication system of claim 22 wherein the detector comprises a call progress detector adapted to detect call progress tones in the communication signal and wherein the call progress detector ceases to detect call progress tones in the communication signal if the NLP indicates that the NLP is active.

31. The communication system of claim 22 wherein the detector comprises a call discriminator adapted to detect facsimile tones and modem tones in the communication signal

and wherein the call discriminator ceases to detect facsimile tones and modem tones in the communication signal if NLP indicates that the NLP is active.

32. The communication system of claim 22 wherein the detector comprises an automatic gain control (AGC) element adapted to detect whether voice is present in the communication signal and to adjust the gain of any voice present in the communication signal and wherein the AGC ceases detecting whether voice is present in the communication signal and adjusting the gain of any voice present in the communication signal if the NLP indicates that the NLP is active.

33. A method of processing a communication signal in a communication system, comprising:

(a) receiving a communication signal;

(b) detecting, with a detector, a parameter of the communication signal;

(c) determining whether to perform non-linear processing on the communication signal; and

(d) disabling a processing step of the detector when non-linear processing is being performed on the communication signal.

34. A method of processing communication signals in a communication system having a plurality of detectors for detecting a parameter of a communication signal, comprising steps of:

(a) receiving a communication signal with a non-linear processor (NLP) adapted to examine the signal and to decide whether or not to enter an active state based upon a parameter of the signal, wherein if the NLP enters an active state, the NLP performs non-linear processing on the signal;

(b) communicating to the plurality of detectors whether the NLP is active or inactive; and

(c) if the NLP is active, causing the plurality of detectors to enter an inactive state.